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JAN 31 2002

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1645

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/664,444

DATE: 01/23/2002
 TIME: 09:55:14

Input Set : A:\#590670 v1 - 2370-63.seq.txt
 Output Set: N:\CRF3\01222002\I664444.raw

3 <110> APPLICANT: PRO-VIRUS, INC.
 5 <120> TITLE OF INVENTION: ONCOLYTIC VIRUS
 7 <130> FILE REFERENCE: 2370-63
 9 <140> CURRENT APPLICATION NUMBER: US/09/664,444
 10 <141> CURRENT FILING DATE: 2000-09-18
 12 <150> PRIOR APPLICATION NUMBER: 09/397,873
 13 <151> PRIOR FILING DATE: 1999-09-17
 15 <160> NUMBER OF SEQ ID NOS: 52
 17 <170> SOFTWARE: PatentIn Ver. 2.1
 19 <210> SEQ ID NO: 1
 20 <211> LENGTH: 11
 21 <212> TYPE: PRT
 22 <213> ORGANISM: Artificial Sequence
 24 <220> FEATURE:
 25 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
 26 peptide
 28 <400> SEQUENCE: 1
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 30 1 5 10
 33 <210> SEQ ID NO: 2
 34 <211> LENGTH: 12
 35 <212> TYPE: PRT
 36 <213> ORGANISM: Artificial Sequence
 38 <220> FEATURE:
 39 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
 40 peptide
 42 <400> SEQUENCE: 2
 43 Cys Leu Asn Ala His Arg Thr Thr His His His Cys
 44 1 5 10
 47 <210> SEQ ID NO: 3
 48 <211> LENGTH: 11
 49 <212> TYPE: PRT
 50 <213> ORGANISM: Artificial Sequence
 52 <220> FEATURE:
 53 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
 54 peptide
 56 <400> SEQUENCE: 3
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 58 1 5 10
 61 <210> SEQ ID NO: 4
 62 <211> LENGTH: 9
 63 <212> TYPE: PRT
 64 <213> ORGANISM: Artificial Sequence

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66 <220> FEATURE:
67 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
68     peptide
70 <400> SEQUENCE: 4
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72   1                               5
75 <210> SEQ ID NO: 5
76 <211> LENGTH: 9
77 <212> TYPE: PRT
78 <213> ORGANISM: Artificial Sequence
80 <220> FEATURE:
81 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
82     peptide
84 <400> SEQUENCE: 5
85 Cys His Ser His His His Arg Gly Cys
86   1                               5
89 <210> SEQ ID NO: 6
90 <211> LENGTH: 9
91 <212> TYPE: PRT
92 <213> ORGANISM: Artificial Sequence
94 <220> FEATURE:
95 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
96     peptide
98 <400> SEQUENCE: 6
99 Cys Trp Asp His His Asn His His Cys
100  1                               5
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104 <211> LENGTH: 9
105 <212> TYPE: PRT
106 <213> ORGANISM: Artificial Sequence
108 <220> FEATURE:
109 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
110     peptide
112 <400> SEQUENCE: 7
113 Cys Asp Asn Asn His His His His Cys
114  1                               5
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118 <211> LENGTH: 10
119 <212> TYPE: PRT
120 <213> ORGANISM: Artificial Sequence
122 <220> FEATURE:
123 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
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127 Cys His His His Arg Ile Ser Ser His Cys
128  1                               5               10
131 <210> SEQ ID NO: 9
132 <211> LENGTH: 1269
133 <212> TYPE: DNA

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136 <400> SEQUENCE: 9
137 atgtctgtta cagtcaagag aatcattgac aacacagtca tagttccaaa acttctctgca 60
138 aatgaggatc cagtggaata cccggcagat tacttcagaa aatcaaagga gattcctctt 120
139 tacatcaata ctacaaaaag tttgtcagat ctaagaggat atgtctacca aggcctcaaa 180
140 tccggaaatg tatcaatcat acatgtcaac agctacttgt atggagcatt aaaggacatc 240
141 cggggtaagt tggataaaga ttggtcaagt ttcggaataa acatcgggaa agcaggggat 300
142 acaatcggaa tatttgacct tgtatccttg aaagccctgg acggcgtagt tccagatgga 360
143 gtatcggatg cttccagaac cagcgcagat gacaaatggg tgcctttgta tctacttggc 420
144 ttatacagag tgggcagaac acaaatgcct gaatacagaa aaaagctcat ggatgggctg 480
145 acaaatcaat gcaaaatgat caatgaacag tttgaacctc ttgtgccaga aggtcgtgac 540
146 atttttgatg tgtggggaaa tgacagtaat tacacaaaaa ttgtcgtgc agtgacatg 600
147 ttcttcacac tgttcaaaaa acatgaatgt gcctcgttca gatacggaa acattgttcc 660
148 agattcaaag attgtgctgc attggcaaca tttggacacc tctgcaaaat aaccggaatg 720
149 tctacagaag atgtaacgac ctggatcttg aaccgagaag ttgcagatga aatgggtccaa 780
150 atgatgcttc caggccaaga aattgacaag gccgattcat acatgcctta ttgatcgac 840
151 tttggattgt cttctaagtc tccatattct tccgtcaaaa accctgcctt ccacttctg 900
152 gggcaattga cagctcttct gtcagatcc accagagcaa ggaatgcccg acagcctgat 960
153 gacattgagt atacatctct tactacagca ggtttgttgt acgcttatgc agtaggatcc 1020
154 tctgctgact tggcacaaca gttttgtgtt ggagataaca aatacactcc agatgatagt 1080
155 accggaggat tgacgactaa tgcaccgcca caaggcagag atgtggtcga atggctcgga 1140
156 tggtttgaag atcaaaacag aaaaccgact cctgatatga tgcagtatgc gaaaagagca 1200
157 gtcagtgcac tgcaaggcct aagagagaag acaattggca agtatgctaa gtcagaattt 1260
158 gacaaatga 1269
161 <210> SEQ ID NO: 10
162 <211> LENGTH: 1269
163 <212> TYPE: DNA
164 <213> ORGANISM: Vesicular stomatitis virus
166 <400> SEQUENCE: 10
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168 aatgaggatc cagtggaata cccggcagat tacttcagaa aatcaaagga gattcctctt 120
169 tacatcaata ctacaaaaag tttgtcagat ctaagaggat atgtctacca aggcctcaaa 180
170 tccggaaatg tatcaatcat acatgtcaac agctacttgt atggagcatt gaaggacatc 240
171 cggggtaagt tggataaaga ttggtcaagt ttcggaataa acatcgggaa ggcaggggat 300
172 acaatcggaa tatttgacct tgtatccttg aaagccctgg acggtgtact tccagatgga 360
173 gtatcggatg cttccagaac cagcgcagat gacaaatggg tgcctttgta tctacttggc 420
174 ttatacagag tgggcagaac acaaatgcct gaatacagaa aaaggtcat ggatgggctg 480
175 acaaatcaat gcaaaatgat caatgaacag tttgaacctc ttgtgccaga aggtcgtgac 540
176 atttttgatg tgtggggaaa tgacagtaat tacacaaaaa ttgtcgtgc agtgacatg 600
177 ttcttcacac tgttcaaaaa acatgaatgt gcctcgttca gatacggaa acattgttcc 660
178 agattcaaag attgtgctgc attggcaaca tttggacacc tctgcaaaat aaccggaatg 720
179 tctacagaag atgtaacgac ctggatcttg aaccgagaag ttgcagatga gatgggtccaa 780
180 atgatgcttc caggccaaga aattgacaag gccgattcat acatgcctta ttgatcgac 840
181 tttggattgt cttctaagtc tccatattct tccgtcaaaa accctgcctt ccacttctg 900
182 gggcaattga cagctcttct gtcagatcc accagagcaa ggaatgcccg acagcctgat 960
183 gacattgagt atacatctct tactacagca ggtttgttgt acgcttatgc agtaggatcc 1020
184 tctgctgact tggcacaaca gttttgtgtt ggagatagca aatacactcc agatgatagt 1080
185 accggaggat tgacgactaa tgcaccgcca caaggcagag atgtggtcga atggctcgga 1140
186 tggtttgaag atcaaaacag aaaaccgact cctgatatga tgcagtatgc gaaacgagca 1200

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```

187 gtcattgtcac tgcaaggcct aagagagaag acaattggca agtatgctaa gtcagaattt 1260
188 gacaaatga 1269
191 <210> SEQ ID NO: 11
192 <211> LENGTH: 1269
193 <212> TYPE: DNA
194 <213> ORGANISM: Vesicular stomatitis virus
196 <400> SEQUENCE: 11
197 atgtctgtta cagtcaagag aatcattgac aacacagtca tagttccaaa acttcctgca 60
198 aatgaggatc cagtggaata cccggcagat tacttcagaa aatcaaagga gattcctctt 120
199 tacatcaata ctacaaaaag tttgtcagat ctaagaggat atgtctacca aggcctcaaa 180
200 tccggaaatg tatcaatcat acatgtcaac agctacttgt atggagcatt gaaggacatc 240
201 cggggtaagt tgataaaga ttggtcaagt ttcggaataa acatcgggaa ggcaggggat 300
202 acaatcggaa tatttgacct tgtatccttg aaagccctgg acggtgtact tccagatgga 360
203 gtatcggatg cttccagaac cagcgcagat gacaaatggt tgcctttgta tctacttggc 420
204 ttatacagag tgggcagaac acaaatgcct gaatacagaa aaaggctcat ggatgggctg 480
205 acaaatcaat gcaaatgat caatgaacag tttgaacctc ttgtgccaga aggtcgtgac 540
206 atttttgatg tgtggggaaa tgacagtaat tacacaaaaa ttgtcgtctg agtggacatg 600
207 ttcttccaca tgttcaaaaa acatgaatgt gcctcgttca gatacggaaac tattgtttcc 660
208 agattcaaag attgtgctgc attggcaaca tttggacacc tctgcaaaat aaccggaatg 720
209 tctacagaag atgtaacgac ctggatcttg aaccgagaag ttgcagatga gatggtccaa 780
210 atgatgcttc caggccaaga aattgacaag gccgattcat acatgcctta tttgatcgac 840
211 tttggattgt cttctaagtc tccatattct tccgtcaaaa accctgcctt ccacttctgg 900
212 gggcaattga cagctcttct gtcagatct accagagcaa ggaatgcccg acagcctgat 960
213 gacattgagt atacatctct tactacagca ggtttgttgt acgcttatgc agtaggatcc 1020
214 tctgctgact tggcacaaca gttttgtgtt ggagatagca aatacactcc agatgatagt 1080
215 accggaggat tgacgactaa tgcaccgcca caaggcagag atgtggtcga atggctcgga 1140
216 tggtttgaag atcaaaacag aaaaccgact cctgatatga tgcagtatgc gaaacgagca 1200
217 gtcattgtcac tgcaaggcct aagagagaag acaattggca agtatgctaa gtcagaattt 1260
218 gacaaatga 1269
221 <210> SEQ ID NO: 12
222 <211> LENGTH: 1269
223 <212> TYPE: DNA
224 <213> ORGANISM: Vesicular stomatitis virus
226 <400> SEQUENCE: 12
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228 aatgaggatc cagtggaata cccggcagat tacttcagaa aatcaaagga gattcctctt 120
229 tacatcaata ctacaaaaag tttgtcagat ctaagaggat atgtctacca aggcctcaaa 180
230 tccggaaatg tatcaatcat acatgtcaac agctacttgt atggagcatt gaaggacatc 240
231 cggggtaagt tggataaaga ttggtcaagt ttcggaataa acatcgggaa ggcaggggat 300
232 acaatcggaa tatttgacct tgtatccttg aaagccctgg acggtgtact tccagatgga 360
233 gtatcggatg cttccagaac cagcgcagat gacaaatggt tgcctttgta tctacttggc 420
234 ttatacagag tgggcagaac acaaatgcct gaatacagaa aaaggctcat ggatgggctg 480
235 acaaatcaat gcaaatgat caatgaacag tttgaacctc ttgtgccaga aggtcgtgac 540
236 atttttgatg tgtggggaaa tgacagtaat tacacaaaaa ttgtcgtctg agtggacatg 600
237 ttcttccaca tgttcaaaaa acatgaatgt gcctcgttca gatacggaaac tattgtttcc 660
238 agattcaaag attgtgctgc attggcaaca tttggacacc tctgcaaaat aaccggaatg 720
239 tctacagaag atgtaacgac ctggatcttg aaccgagaag ttgcagatga gatggtccaa 780
240 atgatgcttc caggccaaga aattgacaag gccgattcat acatgcctta tttgatcgac 840
241 tttggattgt cttctaagtc tccatattct tccgtcaaaa accctgcctt ccacttctgg 900

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242 gggcaattga cagctcttct gctcagatcc accagagcaa ggaatgcccg acagcctgat 960
243 gacattgagt atacatctct tactacagca ggtttgttgt acgcttatgc agtaggatcc 1020
244 tctgctgact tggcacaaca gttttgtgtt ggagatagca aatacactcc agatgatagt 1080
245 accggaggat tgacgactaa tgcaccgcca caaggcagag atgtggtcga atggctcgga 1140
246 tggtttgaag atcaaaacag aaaaccgact cctgatatga tgcagtatgc gaaacgagca 1200
247 gtcatgtcac tgcaaggcct aagagagaag acaattggca agtatgctaa gtcagaattt 1260
248 gacaaatga                                     1269
251 <210> SEQ ID NO: 13
252 <211> LENGTH: 1029
253 <212> TYPE: DNA
254 <213> ORGANISM: Vesicular stomatitis virus
256 <220> FEATURE:
257 <221> NAME/KEY: modified_base
258 <222> LOCATION: (1)..(1029)
259 <223> OTHER INFORMATION: "n" represents a, t, c, g, other or unknown
261 <400> SEQUENCE: 13
262 tcaatcatatc atgtcaacag ctacttgtat ggagcattga aggacatccg gggtaagttg 60
263 gataaagatt ggtcaagttt cggaataaac atcgggaagg caggggatac aatcggaata 120
264 ttgaccttg tacccttgaa agccctggac ggtgtacttc cagatggagt atcggatgct 180
265 tcagaacca ggcagatga caaatggttg cctttgtatc tacttggctt atacagagtg 240
266 ggcagaacac aaatgcctga atacagaaaa aggctcatgg atgggctgac aaatcaatgc 300
267 aaaatgatca atgaacagtt tgaacctctt gtgccagaag gtcgtgacat ttttgatgtg 360
268 tggggaaatg acagtaatta cacaaaaatt gtcgctgcag tggacatggt cttccacatg 420
269 ttcaaaaaac atgaatgtgc ctcttcaga tacggaacta ttgtttccag attcaaagat 480
270 tgtgctgcat tggcaacatt tggacacctc tgcaaaataa ccggaatgtc tacagaagat 540
271 gtaacgacct ggatcttgaa ccgagaagtt gcagatgaga tggccaaaat gatgcttcca 600
272 ggccaagaaa ttgacaaggc cgattcatac atgccttatt tgatcgactt tggattgtct 660
273 tctaagtctc catattcttc cgtcaaaaac cctgccttcc acttctgggg gcaattgact 720
274 gacattgagt atacatctcn tactacagca ggtttgttgt acgcttatgc agtaggatcc 780
275 tctgctgact tggcacanca gttttgtgtt ggagatagca aatacactcc agatgatagt 840
276 accggaggat tgacgactaa tgcaccgcca caaggcagag atgtggtcga atggctcgga 900
277 tggtttgaag atcaaaacag aaaaccgact cctgatatga tgcagtatgc gaaacgagca 960
278 gtcatgtcac tgcaaggcct aagagagaag acaattggca agtatgctaa gtcagaattt 1020
279 gacaaatga                                     1029
282 <210> SEQ ID NO: 14
283 <211> LENGTH: 422
284 <212> TYPE: PRT
285 <213> ORGANISM: Vesicular stomatitis virus
287 <400> SEQUENCE: 14
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289   1           5           10           15
291 Lys Leu Pro Ala Asn Glu Asp Pro Val Glu Tyr Pro Ala Asp Tyr Phe
292           20           25           30
294 Arg Lys Ser Lys Glu Ile Pro Leu Tyr Ile Asn Thr Thr Lys Ser Leu
295           35           40           45
297 Ser Asp Leu Arg Gly Tyr Val Tyr Gln Gly Leu Lys Ser Gly Asn Val
298           50           55           60
300 Ser Ile Ile His Val Asn Ser Tyr Leu Tyr Gly Ala Leu Lys Asp Ile
301 65           70           75           80

```

Use of n and/or Xaa has been detected in the Sequence Listing.
 Review the Sequence Listing to insure a corresponding
 explanation is presented in the <220> to <223> fields of
 each sequence using n or Xaa.

VERIFICATION SUMMARY

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Input Set : A:\#590670 v1 - 2370-63.seq.txt

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L:9 M:270 C: Current Application Number differs, Replaced Current Application Number

L:274 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13

L:275 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13

L:602 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17

L:605 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17

L:1340 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37

L:1555 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42

L:1561 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42

L:1754 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44

L:2169 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49

L:2631 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51

L:2637 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51

L:3207 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52